



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/785,628

02/24/2004

Xiong Liu

STL11426

2953

7590

03/31/2008

FELLERS, BLANKENSHIP, BAILEY, TIPPENS P.C.

100 NORTH BROADWAY

SUITE 1700

OKLAHOMA CITY, OK 73102

EXAMINER

NEGRON, DANIEL L

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

03/31/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/785,628

Applicant(s)

LIU ET AL.

Examiner

Daniell L. Negrón

Art Unit

2627

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-18, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 12 and 17 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-7, 14-16, 18, 22 is/are rejected.
- 7) ☒ Claim(s) 4, 8-10 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The indicated allowability of claims 1-3, 5-7, and 14-16 is withdrawn in view of the newly discovered reference to Melrose et al U.S. Patent No. 7,271,977. Therefore, the finality of the Office action mailed on January 2, 2008 has been withdrawn. Rejections based on the newly cited reference follow.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 6 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Melrose et al U.S. Patent No. 7,271,977.

Regarding claim 6, Melrose et al disclose a method of compensating for positioning errors in a data storage device, comprising a step of determining a head positioning profile (i.e., microjog profile) for a first track in relation to a track profile for the first track in combination with a track profile for a second track and a non-zero weighting (polynomial coefficient) value (column 2, lines 50-63).

Regarding claim 16, Melrose et al disclose a method of compensating for positioning errors in a data storage device wherein the first and second tracks are disposed on a rotatable storage medium (Fig. 1 and disclosure thereof).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 5, 7, 14, 15, 18, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melrose et al U.S. Patent No. 7,271,977 in view of Perlmutter et al U.S. Patent No. 6,965,491.

Regarding claim 1, Melrose et al disclose a method comprising determining a head positioning (i.e., microjog) profile for a first track in relation to a track profile (i.e., squeeze) for the first track, a track profile for a second track and a non-zero weighting (i.e., polynomial coefficient) value (column 6, lines 14-36), but fail to explicitly disclose comparing the track profile for the first track to a predetermined threshold, and performing the determining step in relation to the comparison.

However, Perlmutter et al disclose a method wherein a track profile is compared to a threshold for the purpose of determining whether to execute a head positioning profile routine (see Fig. 8A and disclosure thereof). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method disclosed by Melrose et al with the method of comparing to a threshold disclosed by Perlmutter et al since doing so would prevent executing unnecessary steps in the method and thus allow the method to operate faster.

Regarding claim 2, Melrose et al disclose a method wherein each track profile is a PES RRO (i.e., WRO) track profile (column 6, lines 49-54).

Regarding claim 3, Melrose et al disclose a method wherein the head positioning (i.e., microjog) profile of the determining step is further generated in relation to a track profile for a third track (column 12, lines 8-22).

Regarding claim 5, Melrose et al as modified by Perlmutter et al disclose a method comprising all the limitations of claim 1 as discussed above, but fail to explicitly disclose wherein the non-zero weighting (i.e., polynomial coefficient) value is substantially 0.5. However, it would have been obvious to one with ordinary skill in the art through routine experimentation and optimization in the absence of criticality for the non-zero weighting value to be equal to zero since the applicant has not disclosed that calculating said particular value solves any stated problem or is for any particular purpose.

Regarding claims 7 and 15, claims 7 and 15 have limitations similar to those treated in the above rejections, and are met by the references as discussed above.

Regarding claim 14, Melrose et al disclose a method wherein the first and second tracks are disposed on a rotatable data storage medium (Fig. 1 and disclosure thereof).

Regarding claim 18, Melrose et al disclose a method comprising steps of determining a head positioning (i.e., microjog) profile for the first track in relation to the first track profile and, a second track profile for a second track, and a third profile for a third track (column 2, lines 50-63 and column 12, lines 8-22), but fail to explicitly disclose comparing the track profile for the first track to a predetermined threshold, and performing the determining step in relation to the comparison.

However, Perlmutter et al disclose a method wherein a track profile is compared to a threshold for the purpose of determining whether to execute a head positioning profile routine (see Fig. 8A and disclosure thereof). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the method disclosed by Melrose et al with the method of comparing to a threshold disclosed by Perlmutter et al since doing so would prevent executing unnecessary steps in the method and thus allow the method to operate faster.

Regarding claim 22, Melrose et al as modified by Perlmutter et al disclose a method further comprising repeating the comparing and determining steps for each of a plurality of tracks on a storage medium so that a first subset of the plurality of tracks have the head positioning profiles determined therefore and a second subset of the plurality of tracks do not have the head positioning profiles determined therefor (column 13, lines 10-25 of Melrose et al).

Allowable Subject Matter

6. Claims 11, 12, and 17 are allowed.

Regarding claims 11, 12, and 17, reasons for allowance are as discussed in the previous Office action mailed January 18, 2006.

7. Claims 4, 8-10, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is (571) 272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph H. Feild/
Supervisory Patent Examiner, Art Unit
2627

/D. L. N./
Examiner, Art Unit 2627
March 20, 2008